

COPY OF PAPERS
ORIGINALLY FILED

1651
RECEIVED

FEB 19 2002

TECH CENTER 1600/2900

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Michael A. Apicella et al.

Title: PRODUCTION OF COMPLEX CARBOHYDRATES

Docket No.: 875.009US2

Filed: November 16, 2001

Examiner:

Serial No.: 09/991,374

Due Date: N/A

Group Art Unit: 1651

Commissioner for Patents
Washington, D.C. 20231

RECEIVED
APR 03 2002
TECH CENTER 1600/2900


We are transmitting herewith the following attached items (as indicated with an "X"):

☒ A return postcard.

☒ An Information Disclosure Statement (1 pgs.), Form 1449 (1 pgs.). References NOT enclosed, cited in parent application.

Please consider this a PETITION FOR EXTENSION OF TIME for sufficient number of months to enter these papers and please charge any additional required fees or credit overpayment to Deposit Account No. 19-0743.

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
P.O. Box 2938, Minneapolis, MN 55402 (612-373-6900)

By: 
Atty: Ann S. Viksnins
Reg. No. 37,748

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231, on this 21 day of January, 2002.

Candis B. Buending

Name



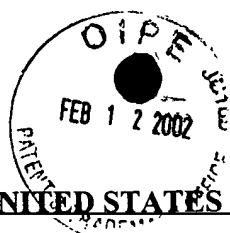
Signature

Customer Number 21186

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
(GENERAL)

P.O. Box 2938, Minneapolis, MN 55402 (612-373-6900)

S/N 09/991,374



COPY OF PAPERS
ORIGINALLY FILED

PATENT

#4
Dmt
4-9-02

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Michael A. Apicella et al.

Examiner:

Serial No.: 09/991,374

Group Art Unit: 1651

Filed: November 16, 2001

Docket: 875.009US2

Title: PRODUCTION OF COMPLEX CARBOHYDRATES

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
Washington, D.C. 20231

RECEIVED
APR 03 2002
TECH CENTER 1600/2900

TECH CENTER 1600/2900

FEB 19 2002

RECEIVED

In compliance with the duty imposed by 37 C.F.R. § 1.56, and in accordance with 37 C.F.R. §§ 1.97 *et. seq.*, the enclosed materials are brought to the attention of the Examiner for review in connection with the above-identified patent application. Pursuant to the provisions of MPEP 609, Applicants request that a copy of the 1449 form, initialed as being considered by the Examiner be returned to the Applicants.

In accordance with 37 C.F.R. §1.98(d), copies of the listed documents are not provided as ~~these references were previously cited by or submitted to the U.S. Patent Office in connection with~~ Applicants' prior U.S. application, Serial No. 09/991,374, filed on November 16, 2001, which is relied upon for an earlier filing date under 35 U.S.C. §120.


Applicants respectfully request consideration of these references during prosecution of the above-identified matter. The Examiner is invited to contact the Applicants' Representative at the below-listed telephone number if there are any questions regarding this communication.

Respectfully submitted,

MICHAEL A. APICELLA ET AL.

By their Representatives,

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
P.O. Box 2938
Minneapolis, MN 55402
(612) 373-6961

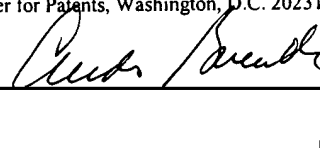
Date 18 January 2002 By 
Ann S. Viksnins
Reg. No. 37,748

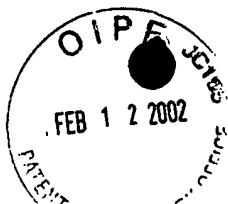
CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231, on this 21 day of January, 2002.

Candis B. Buending

Name

Signature





COPY OF PAPERS
ORIGINALLY FILED

RECEIVED

FEB 19 2002

TECH CENTER 1600/2900

Form 1449*

INFORMATION DISCLOSURE STATEMENT
BY APPLICANT
(Use several sheets if necessary)

Atty. Docket No.: 875.009US2

Serial No. 09/991,374

Applicant: Michael A. Apicella et al.

Filing Date: November 16, 2001

Group: 1651

U.S. PATENT DOCUMENTS

**Examiner Initial	Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
	4,703,008	10/27/1987	Lin, F.	435	240.2	11/30/84
	4,745,051	05/17/1988	Smith, G.E., et al.	435	68	05/27/83
	5,308,460	05/03/1994	Mazid, M.A., et al.	204	180.1	10/30/92
	5,370,872	12/06/1994	Cryz, S.J., et al.	424	194.1	08/12/91
	5,705,367	01/06/1998	Gotschlich, E.C.	435	97	07/18/96
	5,736,533	04/07/1998	Simon, P.M., et al.	514	61	06/07/95
	5,747,326	05/05/1998	Gerardy-Schahn, R., et al.	435	240.2	07/17/95
	5,945,322	08/31/1999	Gotschlich, E.C.	435	193	06/18/97
	5,955,347	09/21/1999	Lowe, J.B.	435	252.3	08/14/96

FOREIGN PATENT DOCUMENTS

**Examiner Initial	Document Number	Date	Country	Class	Subclass	Translation Yes No
	98/50557	11/12/1998	PCT	C12N	15/52	

OTHER DOCUMENTS

(Including Author, Title, Date, Pertinent Pages, Etc.)

**Examiner Initial	
	Alexander, D.C., et al., "Role of the rfe Gene in the Biosynthesis of the Escherichia coli O7-Specific Lipopolysaccharide and Other O-Specific Polysaccharides Containing N-Acetylglucosamine", <u>Journal of Bacteriology</u> , 176(22), 7079-7084, (Nov. 1994)
	Andersson, S.G., et al., "The Genome sequence of Rickettsia prowazekii and the origin of mitochondria", <u>Nature</u> , 396, pp. 133-140, (Nov. 12, 1998)
	Bozue, J.A., et al., "Haemophilus ducreyi Produces a Novel Sialyltransferase", <u>The Journal of Biological Chemistry</u> , 274 (7), pp. 4106-4114, (Feb. 12, 1999)
	Bugert, P., et al., "Molecular analysis of the ams operon required for exopolysaccharide synthesis of Erwinia amylovora", <u>Molecular Microbiology</u> , 15 (5), pp. 917-933, (1995)
	Comstock, L.E., et al., "Analysis of a Capsular Polysaccharide Biosynthesis Locus of Bacteriodes fragilis", <u>Infection and Immunity</u> , 67 (7), pp. 3525-3532, (July 1999)
	Darveau, R.P., et al., "Procedure for Isolation of Bacterial Lipopolysaccharides from Both Smooth and Rough Pseudomonas aeruginosa and Salmonella typhimurium strains", <u>Journal of Bacteriology</u> , 155(2), 831-838, (August 1983)

Examiner

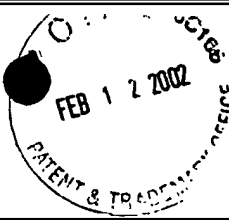
Date Considered

*Substitute Disclosure Statement Form (PTO-1449)

**EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

RECEIVED
APR 10 3 2002

TECH CENTER 1600/2900



COPY OF PAPERS
ORIGINALLY FILED

RECEIVED

APR 03 2002

TECH CENTER 1600/2900
Sheet 2 of 4

Form 1449*

Atty. Docket No.: 875.009US2

Serial No. 09/991,374

INFORMATION DISCLOSURE STATEMENT
BY APPLICANT

(Use several sheets if necessary)

Applicant: Michael A. Apicella et al.

Filing Date: November 16, 2001

Group: 1651

RECEIVED

FEB 19 2002

TECH CENTER 1600/2900

OTHER DOCUMENTS

(Including Author, Title, Date, Pertinent Pages, Etc.)

**Examiner
Initial

Gibson, B.W., et al., "Characterization of Bacterial Lipooligosaccharides by Delayed Extraction Matrix-Assisted Laser Desorption Ionization Time-of-Flight Mass Spectrometry", J. Am. Soc. Mass. Spectrom., 8 (6), pp. 645-658, (June 1997)

Gilbert, M., et al., "Cloning of the Lipooligosaccharide alpha-2,3-Sialyltransferase from the Bacterial Pathogens *Neisseria meningitidis* and *Neisseria gonorrhoeae*", The Journal of Biological Chemistry, 271 (45), pp. 28271-28276, (Nov. 6, 1996)

Gotschlich, E.C., "Genetic Locus for the Biosynthesis of the Variable Portion of *Neisseria gonorrhoeae* Lipooligosaccharide", J. Exp. Med., 180, pp. 2181-2190, (Dec. 1994)

Grunden, A.M., et al., "Repression of the *Escherichia coli* modABCD (Molybdate Transport) Operon by ModEt", Journal of Bacteriology, 178 (3), pp. 735-744, (Feb. 1996)

Holst, O., et al., "Structural analysis of the heptose/hexose region of the lipopolysaccharide from *Escherichia coli* K-12 strain W3100", Carbohydrate Res., 215 (2), pp. 323-335, (1991)

Jennings, M.P., et al., "Molecular analysis of a locus for the biosynthesis and phase-variable expression of the lacto-N-neotetraose terminal lipopolysaccharide structure in *Neisseria meningitidis*", Molecular Microbiology, 18 (4), pp. 729-740, (1995)

Kwaik, Y.A., et al., "Analysis of *Haemophilus influenzae* Type b Lipooligosaccharide-Synthesis Genes that Assemble or Expose a 2-keto-3-deoxyoctulosonic Acid Epitope.", Molecular Microbiology, 5(10), 2475-2480, (Oct. 1991)

Marolda, C.L., et al., "Genetic Analysis of the dTDP-Rhamnose Biosynthesis Region of the *Escherichia coli* VW187 (O7:K1) rfb Gene Cluster: Identification of Functional Homologs of rfbB and rfbA in the rff Cluster and Correct Location of the rffE Gene", Journal of Bacteriology, 177 (19), pp. 5539-5546, (Oct. 1995)

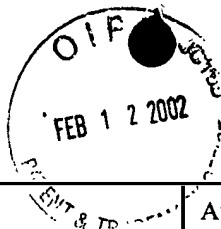
McLaughlin, R., et al., "Characterization and Sequence Analysis of the lsg (LOS Synthesis Genes) Locus from *Haemophilus influenzae* type b", Journal of Endotoxin Res., 1, 165-174, (1994)

Examiner

Date Considered

*Substitute Disclosure Statement Form (PTO-1449)

**EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



COPY OF PAPERS
ORIGINALLY FILED

RECEIVED

APR 03 2002

TECH CENTER 1600/2900

Form 1449*	Atty. Docket No.: 875.009US2	Serial No. 09/991,374
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)	Applicant: Michael A. Apicella et al.	
	Filing Date: November 16, 2001	Group: 1651

OTHER DOCUMENTS

(Including Author, Title, Date, Pertinent Pages, Etc.)

**Examiner
Initial

RECEIVED

FEB 19 2002

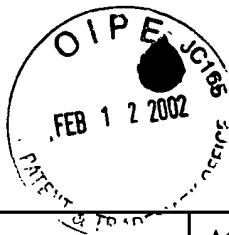
TECH CENTER 1600/2900

Nakano, Y., et al., "A gene cluster for 6-deoxy-L-talan synthesis in <i>Actinobacillus actinomycetemcomitans</i> ", <u>Biochimica et Biophysica Acta</u> , 1442, pp. 409-414, (1998)
Phillips, N.J., et al., "Characterization of Chimeric Lipopolysaccharides from <i>Escherichia coli</i> Strain JM109 Transformed with Lipooligosaccharide synthesis genes (isg) from <i>Haemophilus influenzae</i> ", <u>J. of Biol. Chem.</u> , 275 (7), pp. 4747-4758, (Feb. 18, 2000)
Phillips, N.J., et al., "Characterization of Two Transposon Mutants from <i>Haemophilus influenzae</i> Type b with Altered Lipooligosaccharide Biosynthesis", <u>Biochemistry</u> , 35, pp. 5937-5947, (1996)
Risberg, A., et al., "Structural analysis of the lipopolysaccharide oligosaccharide epitopes expressed by a capsule-deficient strain of <i>Haemophilus influenzae</i> Rd", <u>Eur. J. of Biochem.</u> , 261 (1), pp. 171-180, (April 1999)
Skurnik, M., et al., "A novel locus of <i>Yersinia enterocolitica</i> serotype O:3 involved in lipopolysaccharide outer core biosynthesis", <u>Molecular Microbiology</u> , 17 (3), pp. 575-594, (1995)
Spinola, S.M., et al., "Cloning and Expression in <i>Escherichia coli</i> of a <i>Haemophilus influenzae</i> Type b Lipooligosaccharide Synthesis Gene(s) that Encodes a 2-Keto-3-Deoxyoctulsonic Acid Epitope", <u>Infection and Immunity</u> , 58(6), 1558-1564, (June 1990)
Sussking, M., et al., "Identification of a Novel Heptoglycan of alpha-1-2-Linked d-glycero-d-manno-heptopyranose. Chemical and antigenic structure of lipopolysaccharides from <i>Klebsiella pneumoniae</i> ssp. <i>Pneumoniae</i> rough strain R20", <u>J. of Biol. Chem.</u> , 273 (12), pp. 7006-7017, (March 1998)
Wang, G., et al., "Characterization of <i>Rhodobacter capsulatus</i> Genes Encoding a Molybdenum Transport System and Putative Molybdenum-Pterin-Binding Proteins", <u>Journal of Bacteriology</u> , 175 (10), pp. 3031-3042, (May 1993)
Yao, Z., et al., "Genetic Analysis of the O-Specific Lipopolysaccharide Biosynthesis Region (rfb) of <i>Escherichia coli</i> K-12 W3110: Identification of Genes That Confer Group 6 Specificity to <i>Shigella flexneri</i> Serotypes Y and 4a", <u>Journal of Bacteriology</u> , 176 (13), pp. 4133-4143, (July 1994)

Examiner	Date Considered
----------	-----------------

*Substitute Disclosure Statement Form (PTO-1449)

**EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



COPY OF PAPER
ORIGINALLY FILED

Sheet 4 of 4

Form 1449*

Atty. Docket No.: 875.009US2

Serial No. 09/991,374

INFORMATION DISCLOSURE STATEMENT
BY APPLICANT
(Use several sheets if necessary)

Applicant: Michael A. Apicella et al.

Filing Date: November 16, 2001

Group: 1651

OTHER DOCUMENTS

(Including Author, Title, Date, Pertinent Pages, Etc.)

**Examiner
Initial

RECEIVED

FEB 19 2002

TECH CENTER 1600/2900

Yoshida, Y., et al., "Identification of a Genetic Locus Essential for Serotype b-Specific Antigen Synthesis in *Actinobacillus actinomycetemcomitans*", Infection and Immunity, 66 (1), pp. 107-114, (Jan. 1998)

Zhang, L., et al., "Molecular and chemical characterization of the lipopolysaccharide O-antigen and its role in the virulence of *Yersinia enterocolitica* serotype O:8", Molecular Microbiology, 23 (1), pp. 63-76, (1997)

RECEIVED

APR 03 2002

TECH CENTER 1600/2900

Examiner

Date Considered

*Substitute Disclosure Statement Form (PTO-1449)

**EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.